Cryptosporidiosis (crip-toe-spor-id-i-ho-sis)

What is cryptosporidiosis?
Cryptosporidiosis is an intestinal illness caused by a microscopic parasite called Cryptosporidium. Approximately 400-500 cases are reported in New York state each year.

Is cryptosporidiosis a new disease?
Although Cryptosporidium is not new, it was not recognized as a cause of human disease until 1976. Cryptosporidiosis was added to the list of reportable diseases in New York state in February 1994.

What are the symptoms of cryptosporidiosis?
The most common symptom is diarrhea, which is usually watery. It is often accompanied by abdominal cramping. Nausea, vomiting, fever, headache and loss of appetite may also occur. Some people infected with Cryptosporidium may not become ill.

Who is susceptible to cryptosporidiosis and how long does the illness last?
All people are presumed susceptible to infection with Cryptosporidium. In healthy individuals with normal immune systems, signs and symptoms generally persist for two weeks or less. However, immunocompromised persons (those with weak immune systems) may have severe and long lasting illness. Some examples of immunocompromised people are those receiving cancer chemotherapy, kidney dialysis or steroid therapy, people with HIV/AIDS and patients with Crohn's disease.

How long after exposure do symptoms appear?
The incubation period may range from one to 12 days with an average of seven days.

How is the disease contracted?
Cryptosporidium is shed in the feces of infected humans and animals. People become infected by ingesting the organism. Cryptosporidium can be spread by person-to-person or animal-to-person contact and by drinking contaminated water. Infected individuals can shed the organism in their stool for several weeks after they recover from the illness. Because cryptosporidiosis is transmitted by the fecal-oral route, the greatest potential to transmit the organism comes from infected people who have diarrhea, people with poor personal hygiene and diapered children.

Does past infection with Cryptosporidium make a person immune?
Some immunity appears to follow infection but the degree to which a previously infected person is immune to subsequent Cryptosporidium infection is unclear. Exposure to a large dose of the parasite could result in recurrent illness.

How is cryptosporidiosis diagnosed?
The infection is diagnosed by identifying the parasite during a microscopic examination of the stool. When a person with diarrheal illness is suspected of having cryptosporidiosis, the health practitioner should specifically request a Cryptosporidium test, since most laboratories do not yet routinely perform the necessary tests needed to identify this particular microscopic parasite. A Cryptosporidium test should specifically be ordered for people with HIV/AIDS or other immunocompromised patients (for example, cancer or transplant patients) who are being treated for diarrhea.

How is cryptosporidiosis treated?
There is no specific treatment for cryptosporidiosis. However, some patients may respond to certain antibiotics. Oral liquids or intravenous fluids are sometimes necessary if dehydration occurs. Anti-diarrheal drugs which reduce the motion of the intestines may provide some temporary improvement. Patients with cryptosporidiosis should obtain nutritional counseling through their health care provider to discuss their diet and how best to minimize the symptoms of their diarrhea.

How can I avoid getting and transmitting cryptosporidiosis?
You can minimize the chances of acquiring and spreading the infection by thoroughly washing your hands after using the toilet, changing diapers or coming into contact with fecal material in any way. Because cattle are a common source of Cryptosporidium, do not drink raw milk and be sure to wash your hands thoroughly after contact with cattle or other farm animals. Avoid drinking untreated and inadequately filtered surface water when camping or when traveling in developing countries. Comply with any water advisory issued by local and state authorities.

Has Cryptosporidium been found in New York state water systems and is it easily detectable?
It is believed that Cryptosporidium has always been present to some degree in water. Recently, it has been found in low numbers in some drinking waters derived from surface water sources (streams, lakes or reservoirs) in New York state and across the nation. No waterborne outbreaks of cryptosporidiosis have been identified in New York state. Only laboratories with specialized testing capabilities can detect the presence of Cryptosporidium cysts in water. Laboratory tests are not very reliable at this time and they cannot tell whether the cyst is alive or dead.

Should immunocompromised persons take extra precautions to minimize their risk of cryptosporidiosis?
Because cryptosporidiosis can be a severe disease in immunocompromised persons, such individuals should discuss the need for extra precautions with their health care provider to minimize their risk of infection. Contaminated drinking water is only one of a number of ways in which cryptosporidiosis can be acquired. Here are some suggested steps to reduce risk of infection:

- Wash hands thoroughly after changing diapers or whenever fecal soiling occurs.
- Avoid sexual practices that may result in hand or mouth exposure to feces, such as oral/anal contact (rimming).
- Avoid direct exposure to cattle and other farm animals. If exposure cannot be avoided, wash your hands thoroughly immediately thereafter.
- Avoid swallowing water when swimming, especially in lakes, ponds or rivers.
- Thoroughly wash all fruits and vegetables. Avoid drinking unpasteurized apple cider.

If an outbreak of waterborne Cryptosporidium is identified (none has been to date in New York), immunocompromised patients should carefully and consistently comply with all public advisories and notices issued by the local or state health department.

The four items listed below may help immunocompromised patients and their health care providers decide whether to take extra routine precautions with drinking water under normal, nonoutbreak conditions:

- Boiling water for at least one minute with a rolling boil will kill Cryptosporidium.
- Properly drilled and maintained wells that utilize underground water are generally protected from surface contamination and are unlikely to contain Cryptosporidium cysts.
- Unless it is distilled or pasteurized, bottled water may not be any safer than tap water. Those bottling companies using properly designed and operated groundwater sources have a very low likelihood of producing water containing Cryptosporidium cysts. Those companies using surface water sources have the same risk of cryptosporidiosis as tap water from the same source unless additional treatment is undertaken. Current standards for bottled water do not guarantee that the water is Cryptosporidium-free. Bottled water sold in New York must also include on the label whether the water comes from a well, spring or municipal source. A list of bottled waters certified for sale in New York along with their sources can be obtained from the New York State Department of Health at (518) 402-7676.
- During an outbreak of cryptosporidiosis in Milwaukee in 1993, one study showed that less diarrhea occurred in houses using water filters with a pore size less than two microns than in houses using filters with large pore sizes. If home water filters are used, follow the manufacturer's instructions supplied with the unit. The instructions will provide information on filter maintenance needed to prevent clogging and ensure proper filtration. Filters should be certified by the National Sanitation Foundation (NSF) or an equivalent testing agency for cyst removal.

For additional information, contact your health care provider or your local or state health department.

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